



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/462,049	04/03/2000	DETLEF WIESE	GK-EIS-1028	4612
26418	7590	12/02/2004	EXAMINER	
REED SMITH, LLP ATTN: PATENT RECORDS DEPARTMENT 599 LEXINGTON AVENUE, 29TH FLOOR NEW YORK, NY 10022-7650			LAO, LUN S	
			ART UNIT	PAPER NUMBER
			2643	

DATE MAILED: 12/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/462,049	WIESE ET AL.	
	Examiner	Art Unit	
	Lun-See Lao	2643	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 April 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 37-72 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 37-72 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Introduction

1. This action response to the preliminary amendment filed on 12-30-1999. Claims 1-36 have been canceled and claims 37-72 have been added. Claims 37-72 are pending.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 37-38, 41, 44, 46-47, 49-51 and 54-55 are rejected under 35 U.S.C. 102(b) as being anticipated by Taniguchi. (EP 0417739).

Consider claim 37, Taniguchi teaches a method of encoding signals, in particular digitized audio signals, with an encoding device for encoding the signal in an encoding format and a processing device for processing of the encoded signal, comprising the steps of:

automatically selecting (see fig.2, 6) the encoding format dependent on the properties of the processing device; and
employing at least one of the following steps for determining the selected coding format (see abstract).

ascertaining the properties of the processing device by a signal directed to the processing device (see page 6 line 3-37); and

calling out the properties (see fig.2, 4) of the processing device from a storage means (see page 7 line 31-39).

Consider claims 38, 41, Taniguchi teaches the processing device includes at least one of a transmitting device for transmission of the encoded signal (see fig.2, $1_1 - 1_m$) and a storage device (4 and page 7 line 31-39) for storage of the encoded signal and a decoding device for decoding of the encoded signal (see page 6 line 4-15); and the prior to determining the encoding format, the properties of the processing device are ascertained a test signal directed to the processing device (see page 8 line 27-30).

Consider claim 44, 46,47, Taniguchi teaches the properties of the processing device are called up out of a storage means prior to encoding (see page 7 line 31-39); and the signal is digitized prior (such as CELP) to the encoding operation (see page 6 line 38-43); and the signal is encoded in a bit rate-reduced (LPC) encoding format (see page line 38-51).

Consider claims 49-50, Taniguchi teaches the method of the transmission and/or storage devices of varying capacity are available as processing devices and prior to transmission and / or storage of the signals, in the case of signals of higher quality, that is to say with a larger amount of data, a transmission device and/or storage device of larger capacity is selected and in the transmission and/or storage of signals of lower quality, that is to say with a smaller quantity of data, a transmission device and/or storage device of smaller capacity is selected (see page 7 line 31- page 8 line 21); and

Art Unit: 2643

the signals to be sent are audio signals, wherein the audio signals are encoded in bit rate-reduced form by the encoding device, wherein a plurality of transmission channels and/or bit rates are available for transmission of the signal and wherein the transmission channel and/or the bit rate in the transmission are so selected that the signal can be transmitted in real time (see page 8 line 27-50).

Consider claim 51, Taniguchi teaches a fixedly preset (see fig.5b, 306a, 306b, 306c) computing power (code rate) is inherently adopted for operation in real time (see col.1 line 10-37).

Consider claim 54, Taniguchi teaches a method of encoding signals, in particular digitized audio signals, with an encoding device (see fig.2, $1_1 \dots 1_m$) for encoding the signal in an encoding format and a processing device (2-7) for processing of the encoded signal, said method including the step of determining the encoding format dependent on the properties of the encoding device (see abstract and page 5 line 39-page 6 line 37).

Consider claims 55 Taniguchi teaches the encoding format is determined by a control device (see fig.2, 4 and 5 and abstract and page 5 line 39-page 6 line 37).

4. Claims 56-60 are rejected under 35 U.S.C. 102(b) as being anticipated by Tomoyuki (EP0327101).

Consider claim 56, Tomoyuki teaches apparatus for encoding signals comprising:

a processing device (see fig.5a, 310,302,304); and

a control device (310 cpu) which automatically presets (see fig.5b, 306) the encoding format to be used for encoding dependent on the properties of said processing device for further processing of the signals;

said control device (see fig. 6, 408) having a signal generator which emits a signal, by which the control device adjusts the properties of the connected processing device (fig.6, 404 see col.4 line 43-col.6 line 42).

Consider claims 57-58, Tomoyuki teaches that an apparatus connected to the apparatus, is a transmission device connected to the control device (see fig.5a, 310), as a processing device for transmission of the signals to a receiver (302), wherein the encoding format (see fig.5b, 306) is adapted by the control device to the properties of the transmission device (fig.6, 404 see col.4 line 43-col.6 line 42); and the encoding format is adapted by the control device to the bit rate of the transmission device (see figs. 5a,5b and col.4 line 35-col.5 line 44);

Consider claims 59-60 Tomoyuki teaches that an apparatus having a storage device connected to the control device (see fig.5 a, 310), as a processing device, for storage of the signals, wherein the encoding format is adapted by the control device (310) to the properties of the storage device (cpu and see col.4 line 35-col.5 line 44); and the apparatus having a decoding device (see fig.6, 404) connected to the control device (408), as a processing device, for decoding of the signals, wherein the encoding format is adapted by the control device to the properties of the decoding device (fig.6, 404 see col.4 line 43-col.6 line 42).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 39-40 and 42-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taniguchi (EP 0417739).

Consider claim 39, Taniguchi teaches the method of the processing device is a transmission device for transmission of the encoded signal (see fig.2, $1_1 \dots 1_m$) ; but Taniguchi does not clearly teach the transmission device is used for simultaneously transmitting and receiving the encoded signal.

However, it is well known in the art such as a speech at a telephone line in two way communication.

Therefore, it would have been obvious that Taniguchi could have the transmission device is used for simultaneously transmitting and receiving the encoded signal to improve a speech coding apparatus.

Consider claim 40, Taniguchi teaches the method of the processing device is a transmitting device for transmission of the encoded signal (see fig.2, $1_1 \dots 1_m$) ; Taniguchi does not clearly teach the transmission device has a decoding device for simultaneous decoding upon the reception of an encoded signal.

However, it is well known in the art such as a speech at a telephone line in two way communication.

Therefore, it would have been obvious that Taniguchi could have the transmission device has a decoding device for simultaneous decoding upon the reception of an encoded signal to improve a speech coding apparatus.

Consider claim 42, Taniguchi teaches the method of the processor power of the processing device is referred to as the property thereof so that the encoding format is determined in such a way that it is processed (see page 6 lines 38-56), but Taniguchi does not clearly teach the processing device in real time. However, it is well known in the processing device in the real time to prevent losing of the data and therefore it would have been obvious that Taniguchi could have the processing in the real time to sufficiency sample code.

Consider claim 43, Taniguchi teaches the method of the processing device is a transmission device for transmission of the encoded signal and wherein the encoding format is determined in dependence on the power of the transmission device (see abstract), but Taniguchi does not clearly teach the transmission device can effect transmission in real time. However, it is well known in the art the transmission device can effect transmission in real time (such as to prevent the channel error data low capacity of channel) and therefore it would have been obvious that Taniguchi could have the transmission device can effect transmission in real time (such as $C=B$ (bandwidth) $\log_2 (1=(S/N))$) to sufficiency sample code.

7. Claim 45 is rejected under 35 U.S.C. 103(a) as being unpatentable over Taniguchi (EP 327101) in view of Dieterich (US PAT. 6,138,051).

Consider claim 45, Taniguchi does not clearly teach the method of the prior to encoding of the signal, by a display/input device, the user of the encoding device is asked to do at least one of: preset the desired encoding format: and preset the properties of the selected processing device and encoding is effected in accordance with the presetting.

However, Dieterich teaches the method of the prior to encoding of the signal, by a display (oscilloscope)/input device, the user of the encoding device is asked to do at least one of: preset the desired encoding format: and preset the properties of the selected processing device and encoding is effected in accordance with the presetting (see col.6 line 17-48).

Therefore, it would have been obvious to one of ordinary skill in the art the time the invention was made to combine the teachings of Taniguchi and Dieterich to provide a method and apparatus for creating a plurality of encode bitstreams that represent selected waveforms in different ways such that when an audio decodes the bitstream, an audible tone or lack thereof will signify the failure of the audio decoder.

8. Claim 48 is rejected under 35 U.S.C. 103(a) as being unpatentable over Taniguchi (EP 327101) in view of Orglmeister (US PAT. 5,199,078).

Consider claim 48, Taniguchi does not clearly teach that the method of the signal is a digitized audio signal and the signal is source-encoded having regard to psycho-acoustic phenomena.

However, Orglmeister teaches the signal is a digitized audio signal and the signal is source-encoded having regard to psycho-acoustic phenomena (see col. 3 lines 15-50).

Therefore, it would have been obvious to one of ordinary skill in the art the time the invention was made to combine the teachings of Taniguchi and Orglmeister to provide a method of data reduction of digital audio signal and of approximated recovery of digital audio signals which makes use of overlapping windowing.

9. Claims 52-53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taniguchi (EP 327101) in view of Strehl (DE3443041).

Consider claim 52, Taniguchi does not clearly teach the method of the processing device is a transmitting device for transmission of the encoded signal and wherein the transmission device has a decoding device for simultaneous decoding upon the reception of an encoded signal, and wherein a fixedly preset computing power is adopted for operation in real time and wherein with simultaneous transmission and reception in real time the encoding formats of the encoding and decoding devices are selected in accordance with the predetermined computing power.

However, Strehl teaches the method of the processing device is a transmitting device for transmission of the encoded signal (see fig.2, 13-14, 23-24, 33-34) and wherein the transmission device has a decoding device (15-16, 25-26, 35-36) for

Art Unit: 2643

inherently simultaneous decoding upon the reception of an encoded signal, and wherein a fixedly preset (secured by test bits) computing power (bit rate or code rate) is adopted for operation in real time and wherein with simultaneous transmission and reception in real time the encoding formats (13,23,33) of the encoding and decoding devices are selected in accordance with the predetermined computing power (see abstracts).

Therefore, it would have been obvious to one of ordinary skill in the art the time the invention was made to combine the teachings of Taniguchi and Strehl to improve the transmission quality of coded image signals.

Consider claim 53, Strehl teaches the method of the presetting in respect of the distribution of the computing power (bit rate or code rate) and thus the choice of the encoding format (see fig.2, 12,22,32) in regard to a preference for the encoding device or the decoding device or parity of the two is effected by an input device (see abstracts).

10 Claims 52-53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taniguchi (EP 327101) in view of Brandenburg (US PAT. 5,50,017).

Consider claim 52, Taniguchi does not clearly teach the method of the processing device is a transmitting device for transmission of the encoded signal and wherein the transmission device has a decoding device for simultaneous decoding upon the reception of an encoded signal, and wherein a fixedly preset computing power is adopted for operation in real time and wherein with simultaneous transmission and

reception in real time the encoding formats of the encoding and decoding devices are selected in accordance with the predetermined computing power.

However, Brandenburg teaches the method of the processing device is a transmitting device for transmission of the encoded signal (see fig.2, signal 1, signal2, signal n) and wherein the transmission device has a decoding device for simultaneous decoding upon the reception of an encoded signal (see col.2 lines 10-65), and wherein a fixedly preset (scaling factor) computing power (bit rate or code rate) is adopted for operation in real time and wherein with simultaneous transmission and reception in real time the encoding formats (13,23,33) of the encoding and decoding devices are selected in accordance with the predetermined computing power (col.3 line 3-col.4 line 65).

Therefore, it would have been obvious to one of ordinary skill in the art the time the invention was made to combine the teachings of Taniguchi and Brandenburg to provide a process for simultaneous transmission of signals from N signal source via a corresponding number of transmission channels with which "data-reduced signals" can be transmitted via transmission channels that are only dimensioned for "average demand" without any perceptible, i.e. by way of illustration audible, loss in signal capacity.

Consider claim 53, Brandenburg teaches the method of the presetting (scaling factor) in respect of the distribution of the computing power (bit rate or code rate) and thus the choice of the encoding format in regard to a preference for the encoding

device or the decoding device or parity of the two is effected by an input device (see col.3 line 3-col.4 line 65).

11. Claims 61-72 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tomoyuki. (EP 0327101) in view of Dieterich (US PAT 6,138,051).

Consider claim 61, Tomoyuki teaches that the apparatus including, connected to the control device (see fig.6, 408), a transmission and/or storage and/or decoding device, wherein the control device detects the properties of the connected processing device and selects the encoding format in accordance with those properties (see col.4 line 43-col.6 line 42) but Tomoyuki does not clearly teach the control device has a test signal generator which emits a signal by which the control device.

However, Dieterich teach the control device(see fig.12,1212) has a test signal generator which emits a signal by which the control device (see col.2, line 14-62 and col.6 line 17-col.7 line 52).

Therefore, it would have been obvious to one of ordinary skill in the art the time the invention was made to combine the teachings of Tomoyuki and Dieterich to provide a test sequence or bitstream that will produce audibly detectable errors in the audio signal produced by an audio decoder if the decoder does not properly decode the bitstream.

Consider claims 62-63 Dieterich teaches that the apparatus of the control device (see fig.12, 1212) has a test signal receiver which receives a test signal by which the control device detects the properties of the connected processing device (1230) and

Art Unit: 2643

selects the encoding format in accordance with those properties (see figs. 3-11 and see col.2 line 14-62 and col.6 line 17 –col.7 line 52); and the test signal is an encoded audio signal (see col.6 line 17-col.7 line 52).

Consider claims 64-67, Dieterich teaches a display (oscilloscope)/input device which is connected to the control device and by which an encoding format to be used by the apparatus can be preset (scalefactor and see col.5 line 22- col.6 line 48); and apparatus of a storage unit (see fig.12, 1214) which is, connected to the control device and in which at least one encoding format is stored 9see col.6 line 17-48); and apparatus, wherein stored in the storage unit, are the properties of the processing device and the encoding formats corresponding to the properties (see figs. 3-11 and see col.2 line 14-62 and col.6 line 17 –col.7 line 52); and all settings can be implemented manually (such as user input by keyboard and mouse (see col.6 line 17-48)).

Consider claims 68-69, Dieterich teaches that the apparatus is provided a display (oscilloscope) which displays the current transmission time of the transmission device/storage time of the storage device and/or the remaining transmission time of the transmission device /storage time of the storage device (see col.6 line 17-col.7 line 16); and there is provided a mixing stage which prior to transmission with the transmission device and/or storage with the storage device mixes together a plurality of monophonic and/or stereophonic audio signals (see col.10 line 37-col.11 line 47).

Consider claim 70-71, Dieterich teaches the apparatus of the signal which is to be transmitted with the transmission device and/or stored with the storage device and/or

which is received from the transmission device can be listened to in a listening device (see fig.12, 150 and col.6 lines 17-48) and the apparatus wherein the level of the signal which is to be transmitted with the transmission device and/or stored with the storage device and/or which is received from the transmission device can be displayed by a level display (such as a meter and see col.6 line 17-47).

Consider claim 72, Tomoyuki teaches that the apparatus provided for respective ones of various processing devices, is a respective control device, wherein the individual control devices exchange the properties of the processing device interrogated thereby with one or more of the other control devices (see figs. 5a,5b,6, and see col.4 line 43-col.6 line 42).

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure. Crouse (US PAT 4,899,384); Chaddha (US PAT. 5,621,660) and Dambacher (US PAT 5,333,155) are recited to show other related the method and apparatus for encoding signals.

13. Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:(703) 872-9306

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

Art Unit: 2643

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lao,Lun-See whose telephone number is (703) 305-2259. The examiner can normally be reached on Monday-Friday from 8:00 to 6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Curtis Kuntz, can be reached on (703) 305-4708.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 whose telephone number is (703) 306-0377.

Lao,Lun-See
Patent Examiner
US Patent and Trademark Office
Crystal Park 2
(703)305-2259


DUC NGUYEN
PRIMARY EXAMINER